

INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

PROJECT REPORT

| | |
|----------------|---------------------------------------|
| Domain | Cloud App Development |
| Team ID | PNT2022TMID29529 |
| College | Arunai Engineering College |

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INTRODUCTION

1.Project Overview:

The project Inventory Management System is a complete desktop based application designed on .Net technology using Visual Studio Software. The main aim of the project is to develop Inventory Management System Model software in which all the information regarding the stock of the organization will be presented. It is an intranet based desktop application which has admin component to manage the inventory and maintenance of the inventory system.

This desktop application is based on the management of stock of an organization. The application contains general organization profile, sales details, Purchase details and the remaining stock that are presented in the organization. There is a provision of updating the inventory also. This application also provides the remaining balance of the stock as well as the details of the balance of transaction.

Each new stock is created and entitled with the named and the entry date of that stock and it can also be update any time when required as per the transaction or the sales is returned in case. Here the login page is created in order to protect the management of the stock of organization in order to prevent it from the threads and misuse of the inventory.

2.Purpose:

The main purpose of Inventory Management is to help businesses easily and efficiently manage the ordering, stocking, storing, and using of inventory. By effectively managing your inventory, you will always know what items are in stock, how many of them are, and where they are located. The primary purpose is to ensure there is enough goods are materials to meet demand without creating over stock, or excess inventory.

LITERATURE SURVEY

1. Existing problem

Beyond having too little or too much inventory, poor inventory management causes inefficiencies because you don't have accurate real-time information on how much inventory you have. This increases the risk of mistakes in reordering inventory from suppliers or of selling nonexistent inventory.

In inventory systems, demand is usually uncertain, and the lead-time can also vary. To avoid shortages, managers often maintain a safety stock. In such situations, it is not clear what order quantities and reorder points will minimize expected total inventory cost. Simulation models can address this question.

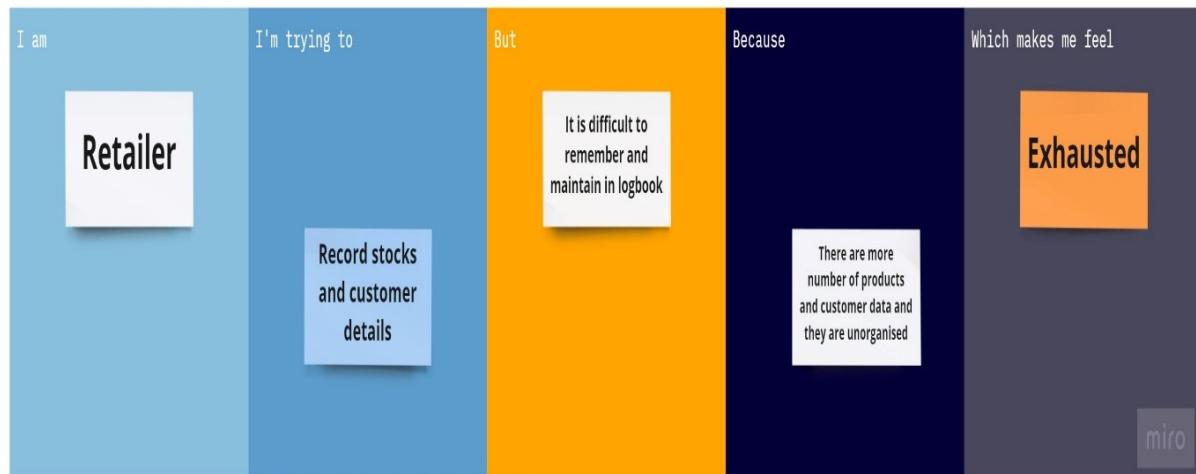
2. References

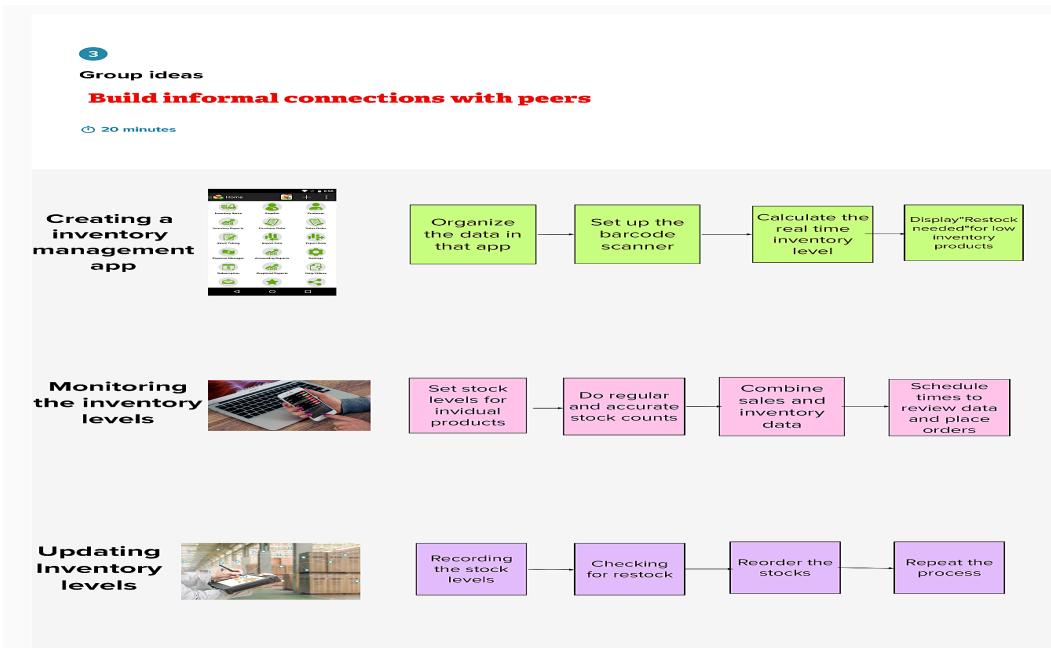
The following Books were used as references for the Project and preparing this Project Report:

1. Cost Accounting-Board of studies, The Institute of Chartered Accountants of India
 2. Management and Production Planning- By Michael Vaz, Vinayak Paralikar
 3. Beginning VB.NET 2003 (Third Edition)- By Thearon Willis, Richard Blair
 4. Visual Basic .NET 2003 Programming – Black Book- By Steven Holzner
 5. SQL Server 2000 Bible- By Paul Nielsen
 6. SQL Server 2000 Unleashed - By Paul Bertucci, Ray Rankins
- The following Websites were used as references for the Project and preparing this Project Report:
1. www.startvbdotnet.com
 2. www.sql-server-helper.com

3. Problem Statement Definitions:

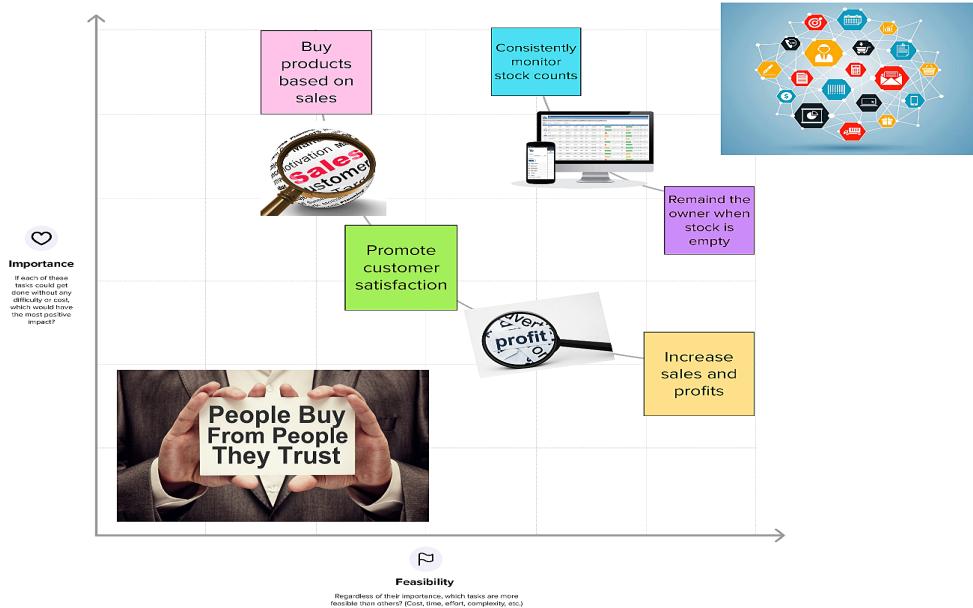
Nowadays, in an era that has advanced technology and a place in the world. Everything can be linked only at your fingertips in the times of rapidly developing with the sophisticated technology of today. Therefore, an inventory system is also not lagging behind in introducing a method of keeping an inventory data systematically and safely. The system plays a very important role in improving the competitiveness of a business. Usually, organizations today face too many challenges to achieve the cost, speed and reliability. Efficient inventory system really help in order to make sure the store's performance and data record is always in good condition and secured from abusers. The company problem is they using chaos system developed, the company can manage their inventory data easily, quickly and more secured.





4 Prioritize
Make schedules visible and transparent

⌚ 20 minutes



3. Proposed Solution

1. Problem Statement (problem to be solved)

Irrespective of the size of the business, inventory management is one of the most challenging processes in the retail sector. In this industry, the efficiency of inventory management directly impacts customer satisfaction.

2. Idea/Solution description

- The best solution for these problems is to create software that has helped many retail companies address their stock management challenges.
- Manual processing is error-prone, especially in complicated processes like inventory management.
- Retail inventory management software can ease the pain of the process. It also improves overall accuracy and business productivity.

3. Novelty/Uniqueness

- The system is inappropriate for the firm and thus, needs improvement. The firm can apply a fixed time-period inventory in which reorder is placed at pre-determined intervals.
- This particular system is appropriate in a situation where customers make routine visits.

4. Social Impact/Customer satisfaction

- In this competitive business environment costs, control serves as an important instrument to remain competitive in the market.
- In such an environment, inventory management ensures control over customer's demands thereby resulting in customer satisfaction and increase financial performance.

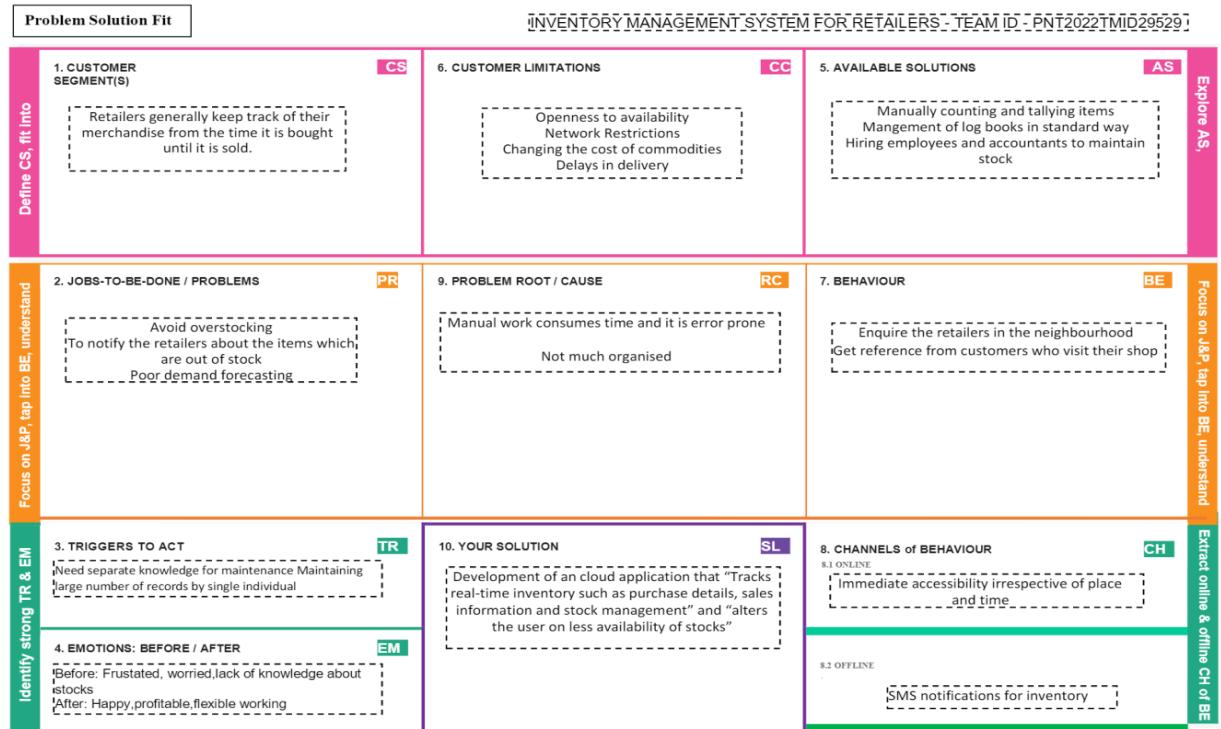
5. Business Model (Revenue Model)

- Inventory management is a systematic approach to sourcing, storing, and selling inventory—both raw materials (components) and finished goods (products).
- In business terms, inventory management means the right stock, at the right levels, in the right place, at the right time, and at the right cost as well as price.

6. Scalability of the Solution

- To increase the scalability of your business, we should use an automated inventory management system for inventory tracking.
- This will make the business much more scalable so that we can continue building consistent growth and take advantage of increased stocks.

4. Problem Solution fit



4. REQUIREMENT ANALYSIS

1. Functional requirements:

| IDENTIFIER | REQUIREMENTS |
|--|---|
| 1. Add stockdetails | This application will allow add stock details. |
| 2. Delete stockdetails | This application will allow the delete stockdetails. |
| 3. Categories of Stock | The categories of stock will be able to be separated using this application. |
| 4. View of Dashboard | Application will allow user to view the dashboard containing stock details. |
| 5. Mail Notification | This application will allow to send mail notification to retailers when the minimum stock limit is reached. |
| 6. Tracking System | The stock can be tracked with this application. |
| 7. Graph analysis | This application will demonstrate sales pattern analysis. |
| 8. Identifying most valuable stock | The most valuable stock for each individual retailer will be shown via this application. |
| 9. Identifying least valuable stock | The least valuable stock for each individual retailer will be shown via this application. |
| 10. Display of expired stocks | This application will display the expired stocks to the particular retailer. |
| 11. Passcode | This application has the option to set a passcode for security. |
| 12. Add multiple accounts | This application has the option of creating multiple accounts for the users. |
| 13. Selection of stock report duration | This application has the ability to select the duration for displaying the stock report. |
| 14. Update account | This application will allow the user/retailer to update their profile. |
| 15. Add account | This application will allow the user/retailer to add their profile. |
| 16. Delete account | This application will allow the user/retailer to delete their profile. |
| 17. PDF report | This application will generate the pdf report of sales pattern analysis. |
| 18. Updation of salestrends | This application will allow constant review of sales trends and updation. |

2. Non-functional requirements

Performance

Easy tracking of records and updating can be done. All the requirements regarding to performance characteristics of the system are specified in the section below. There are two types of requirements.

A. Static Requirements

Number of terminals: The software makes use of underlying database that will reside at the same system, while the front end will be available to the administrative computer.

B. Dynamic Requirements

These specify constraints on the execution characteristics of the system they typically include response me and throughout of the system.

Reliability

The software will not be able to connect to the database in the event of the server being down due to a hardware or software failure.

Availability

The software will be available only to administrator of the organization and the product as well as customer details will be recorded by him.

Security

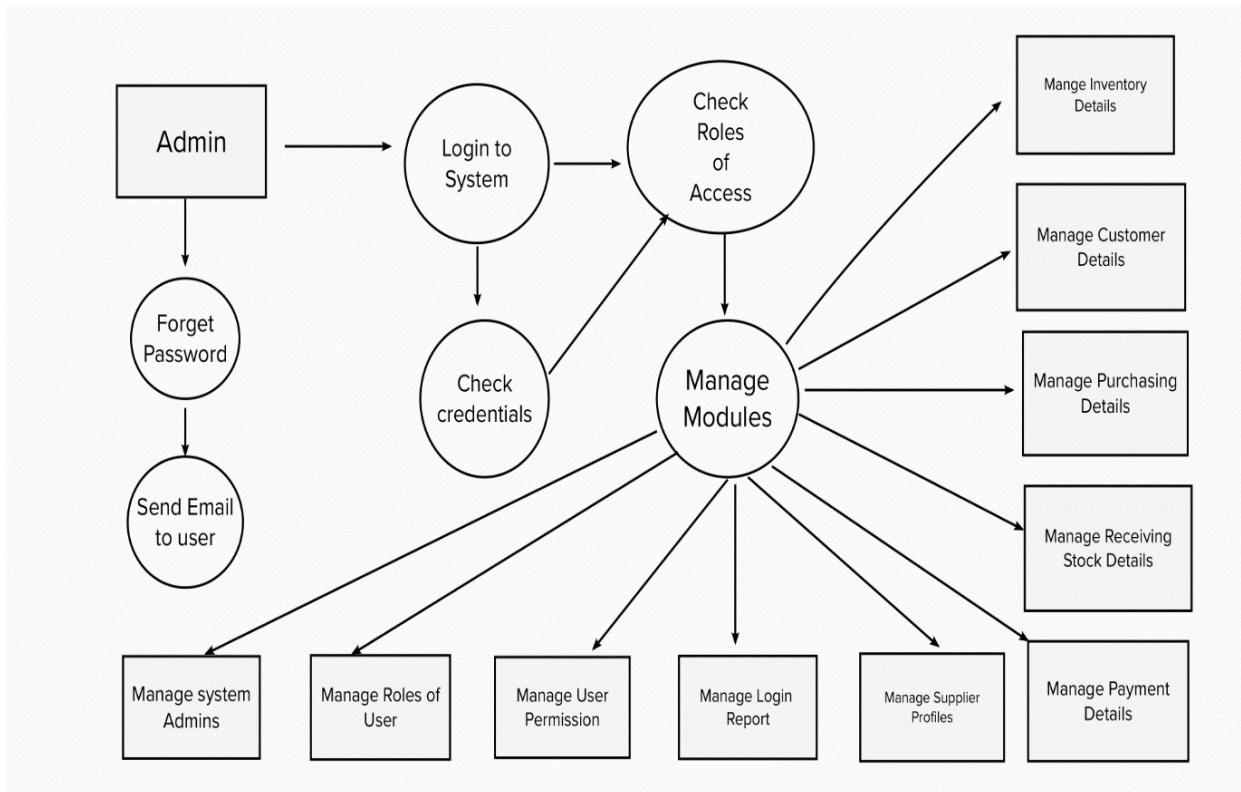
The security requirements deal with a primary security.

Maintability

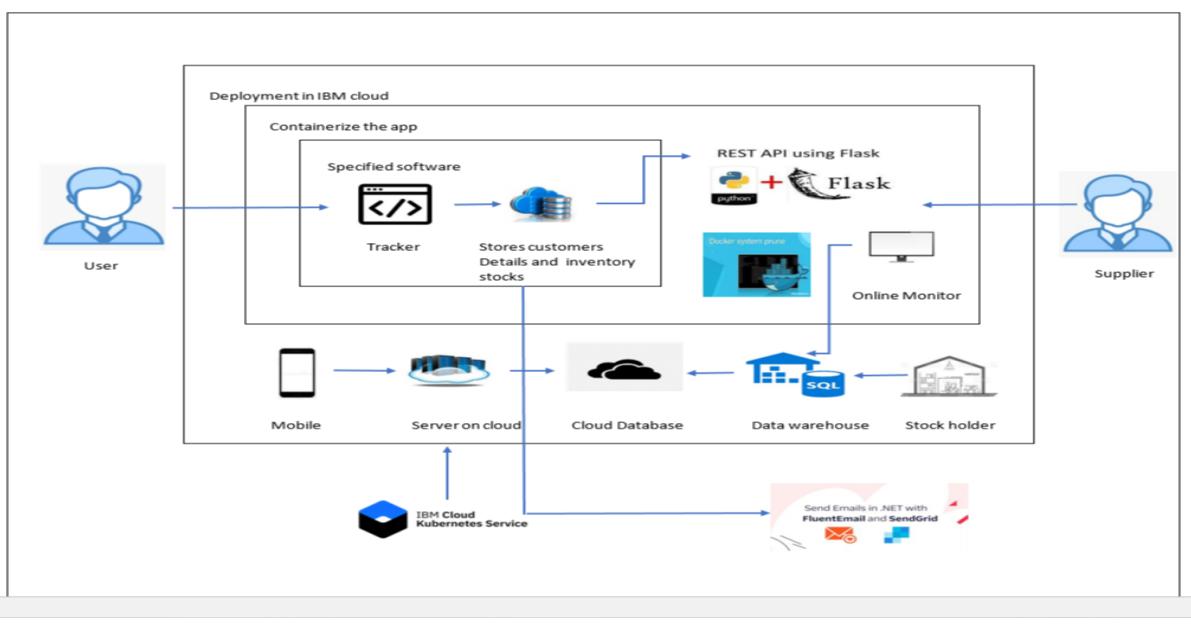
Backups for database are available.

5. PROJECT DESIGN

1. Data flow diagram



2. Solution and Technical Architecture



3. User stories

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Release |
|------------------------|-------------------------------|-------------------|---|--|----------|----------|
| Customer (Mobile user) | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming my password. | I can access my account / dashboard | High | Sprint-1 |
| | | USN-2 | As a user, I will receive confirmation email once I have registered for the application | I can receive confirmation email & click confirm | High | Sprint-1 |
| | | USN-3 | As a user, I can register for the application through Facebook | I can register & access the dashboard with Facebook Login | Low | Sprint-2 |
| | | USN-4 | As a user, I can register for the application through Gmail | I can register and access the dashboard with Gmail login | Medium | Sprint-1 |
| | Login | USN-5 | As a user, I can log into the application by entering email & password | I can register and access the dashboard with email and password | High | Sprint-1 |
| | | USN-6 | As a user, I can view the stock availability status | I can view the stock availability status | High | Sprint-2 |
| | | USN-7 | As a user, I can view the orders status | I can view the order status | Medium | Sprint-3 |
| | Dashboard | USN-8 | As a user, I can view the shipping tracking status | I can view the shipping tracking status | Medium | Sprint-4 |
| | | USN-9 | As a user, I should receive alerts on stock availability if it drops belows the set threshold | I should receive prompt alerts on stock availability if it drops below the set threshold | Medium | Sprint-4 |
| Customer (Web user) | Registration | USN-10 | As a user, I can register for the application by entering my email, password, and confirming my password. | I can access my account / dashboard | High | Sprint-1 |
| | | USN-11 | As a user, I will receive confirmation email once I have registered for the application | I can receive confirmation email & click confirm | High | Sprint-1 |
| | | USN-12 | As a user, I can register for the application through Facebook | I can register & access the dashboard with Facebook Login | Low | Sprint-2 |

| | | | | | | |
|-------------------------|-----------|--------|---|--|--------|----------|
| | | USN-13 | As a user, I can register for the application through Gmail | I can register and access the dashboard with Gmail login | Medium | Sprint-1 |
| | Login | USN-14 | As a user, I can log into the application by entering email & password | I can register and access the dashboard with email and password | High | Sprint-1 |
| | Dashboard | USN-15 | As a user, I can view the stock availability status | I can view the stock availability status | High | Sprint-2 |
| | | USN-16 | As a user, I can view the orders status | I can view the order status | Medium | Sprint-3 |
| | | USN-17 | As a user, I can view the shipping tracking status | I can view the shipping tracking status | Medium | Sprint-4 |
| | Alerts | USN-18 | As a user, I should receive alerts on stock availability if it drops belows the set threshold | I should receive prompt alerts on stock availability if it drops below the set threshold | Medium | Sprint-4 |
| Customer Care Executive | | USN-19 | As a customer care executive,I can view the complaints on chat box | I can view the complaints on chat box | Medium | Sprint-4 |
| | | USN-20 | As a customer, I should be able solve and reply for the customers queries | I can reply to customer queries in the chat thread | Low | Sprint-4 |
| | | USN-21 | As a customer, I can close the complaint after assisting | I can close the complaint after assisting | Low | Sprint-4 |
| Administrator | | USN-22 | As a Administrator, I would take care of registrations and maintenance of accounts, | I can take care of registrations and maintenance of accounts | High | Sprint-3 |
| | | USN-23 | As a Administrator, I Would resolve issues on Access | I can resolve issues in Access | High | Sprint-2 |
| | | USN-24 | As a Administrator, I Would resolve issues in supply chain/ Syncing of Orders | I can resolve issues in supply chain/ Syncing of Orders | High | Sprint-4 |

6. PROJECT PLANNING & SCHEDULING

1. Sprint Planning & Estimation

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Story points | Team Members |
|----------|-------------------------------|-------------------|---|---|----------|--------------|--|
| Sprint 1 | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming my password. | I can access my account /dashboard | High | 10 | Devadharshini V Bhuvaneshwari R DivyaDharshini.B Jothika.S Nagaarthi P |
| | | USN-2 | As a user, I will receive confirmation email once I have registered for the application | I can receive confirmation email & click confirm | High | 5 | Nagaarthi.P Jothika.S |
| | | USN-3 | As a user, I can register for the application through Facebook | I can register & access the dashboard with Facebook Login | Low | 5 | DivyaDharshini.B Nagaarthi P |
| | | USN-4 | As a user, I can register for the application through Gmail | I can register & application Through Gmail | Medium | 20 | Devadharshini V Bhuvaneshwari.R Jothika.S |
| | Login | USN-5 | As a user, I can log into the application by entering email & password | I can access my account | High | 10 | Bhuvaneshwari.R Nagaarthi.P Jothika.S Devadharshini.V |
| | Dashboard | USN-6 | As a user, I can log into my account for the mobile | I can access my account /Dashboard | High | 5 | Devadharshini.V DivyaDharshini.B |
| Sprint 2 | Registration | USN-7 | As a user, I can register for the application by entering my email, password, and confirming my password | I can access my account/ Dashboard | High | 10 | Nagaarthi.P Jothika.S DivyaDharshini.B Bhuvaneshwari.R |
| | | USN-8 | As a user, I will receive confirmation email once I have registered for the application | I can receive confirmation email & click confirm | High | 10 | Devadharshini.V DivyaDharshini.B Nagaarthi P Jothika.S |
| | | USN-9 | As a user, I can register for the application through Facebook | I can register & access the dashboard with Facebook Login | Low | 20 | Devadharshini.V Bhuvaneshwari.R DivyaDharshini.B Jothika.S |

| | | | | | | | |
|----------|------------------|--------|--|--|--------|----|---|
| | | USN-10 | As a user, I can upload a Profile photo and add my name to my account | I can upload my Profile photo/Name in My account | Medium | 5 | Devadharshini.V Bhuvaneshwari.R |
| Sprint 3 | Customer Support | USN-11 | As a user, I can support for customers to handle queries and complaints from their customers | I can support for customers to clear complaints | High | 5 | Divyadharshini Jothika.S Nagaarthi P |
| Sprint 4 | Responsibility | USN-12 | As a system administrator I want to be able to add new users when required so that | I Can add new users | Medium | 10 | Nagaarthi.P Jothika.S DivyaDharshini.B Bhuvaneshwari.R |

2. Sprint Delivery Schedule

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|----------|--------------------|----------|-------------------|---------------------------|---|------------------------------|
| Sprint-1 | 20 | 6 Days | 24 Oct 2022 | 29 Oct 2022 | 20 | 31 Oct 2022 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 20 | 06 Nov 2022 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 20 | 13 Nov 2022 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 19 Nov 2022 |

Velocity:

$$AV = \frac{\text{Sprint Duration}}{\text{Velocity}} = \frac{20}{6} = 3.34$$

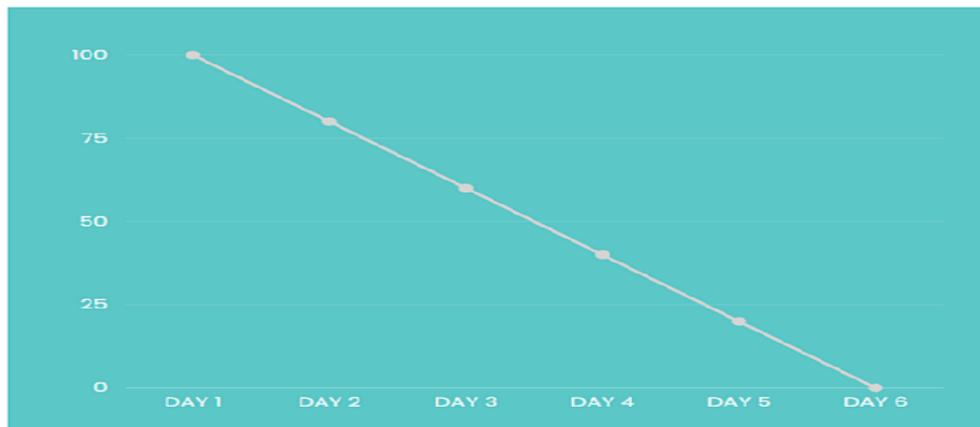
Sprint 1(AV) = 3.34

Sprint 2(AV) = 3.34

Sprint 3(AV) = 3.34

Sprint 4(AV) = 3.34

Burn down Chart:



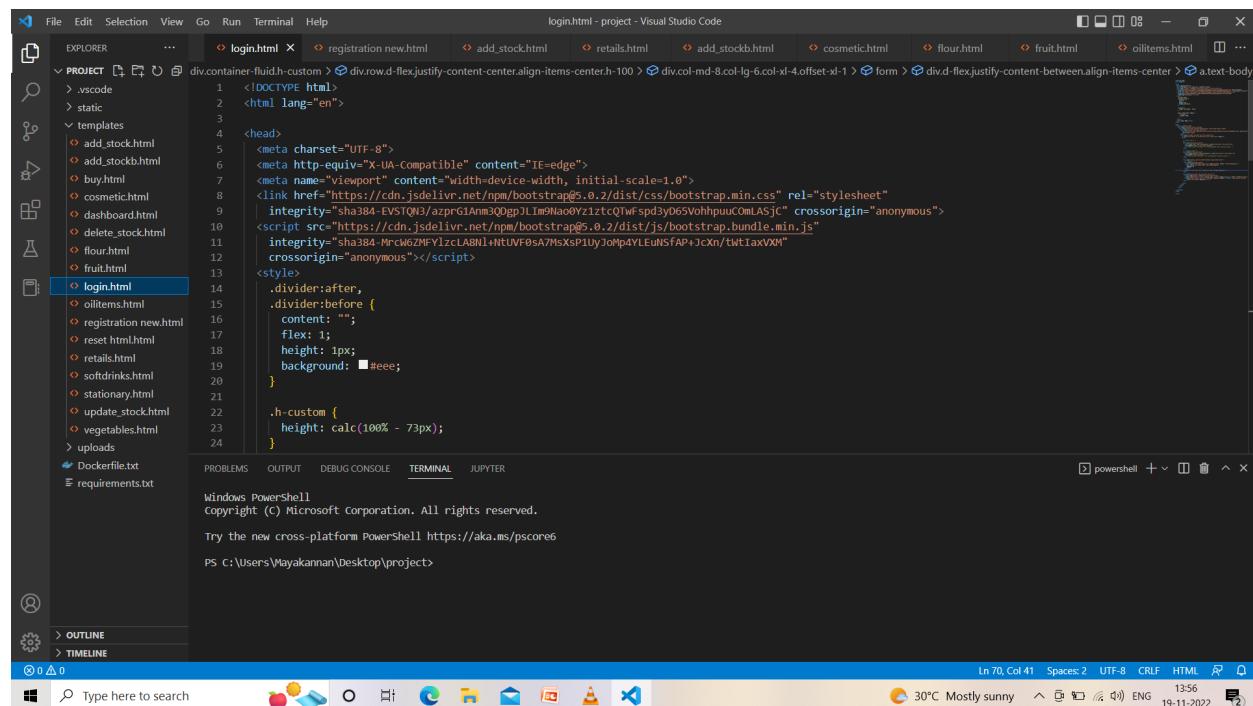
3. Reports from Jira

| Sprints | OCT | NOV | DEC | JAN '23 |
|--|-------------|-------------|-----|---------|
| > IMSFRI-5 Registration | | [IMSFRI...] | | |
| > IMSFRI-6 Application | | [IMSFRI...] | | |
| > IMSFRI-7 Update Inventory details | | [IMSFRI...] | | |
| > IMSFRI-8 Add new stock | | [IMSFRI...] | | |
| > IMSFRI-9 Verify customer feedback | | [IMSFRI...] | | |
| > IMSFRI-10 Inventory Control | [IMSFRI...] | | | |
| > IMSFRI-11 Performance of Application | | [IMSFRI...] | | |
| > IMSFRI-12 Login | [IMSFRI...] | | | |
| > IMSFRI-13 Dashboard | | [IMSFRI...] | | |
| + Create Epic | | | | |

7. CODING AND SOLUTION

1. Feature 1

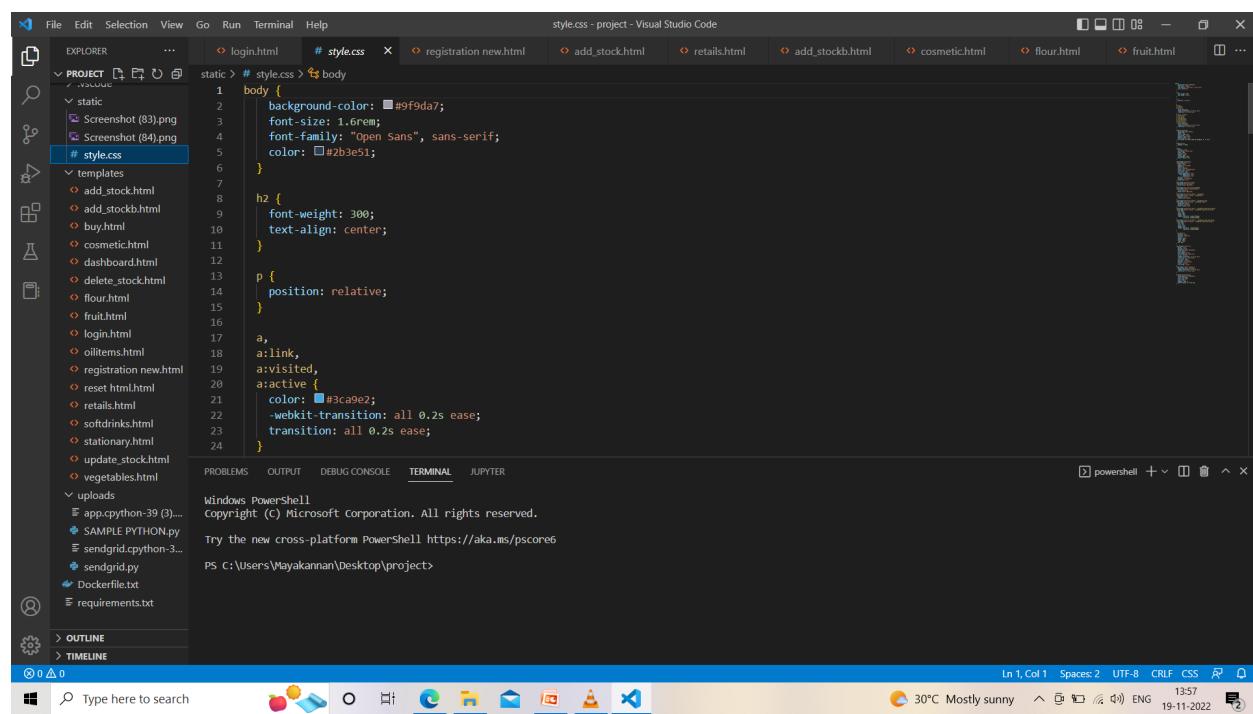
HTML CODE:



The screenshot shows the Visual Studio Code interface with the 'login.html' file open in the editor. The code is an HTML document with meta tags, a script tag for Bootstrap, and a CSS style section.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN/azprG1Anm3QDqgJLImNao8Yz1ztCQTwSpdY065VohhpunComLAsjC" crossorigin="anonymous">
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYzLa8qplmYtZkXl0O�M8+Q93+LkK=MSxP1uy7mp4YLEUNsfAPrJcxN/twTiaXVM" crossorigin="anonymous"></script>
<style>
    .divider::after,
    .divider::before {
        content: "";
        flex: 1;
        height: 1px;
        background: #eee;
    }
    .h-custom {
        height: calc(100% - 73px);
    }
</style>
```

CSS CODE:



The screenshot shows the Visual Studio Code interface with the 'style.css' file open in the editor. The code defines styles for the body, h2, p, and a elements.

```
body {
    background-color: #f9fda7;
    font-size: 1.6rem;
    font-family: "Open Sans", sans-serif;
    color: #2b3e51;
}

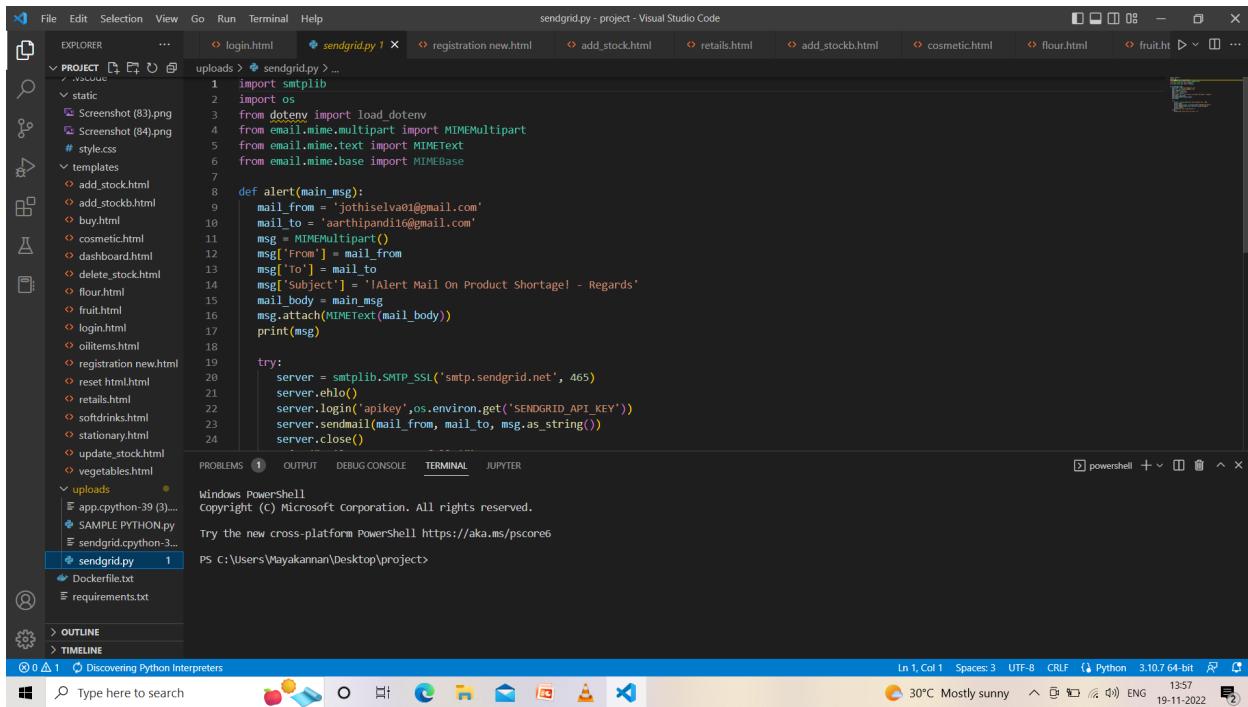
h2 {
    font-weight: 300;
    text-align: center;
}

p {
    position: relative;
}

a,
a:link,
a:visited,
a:active {
    color: #3ca9e2;
    -webkit-transition: all 0.2s ease;
    transition: all 0.2s ease;
}
```

2. Feature 2

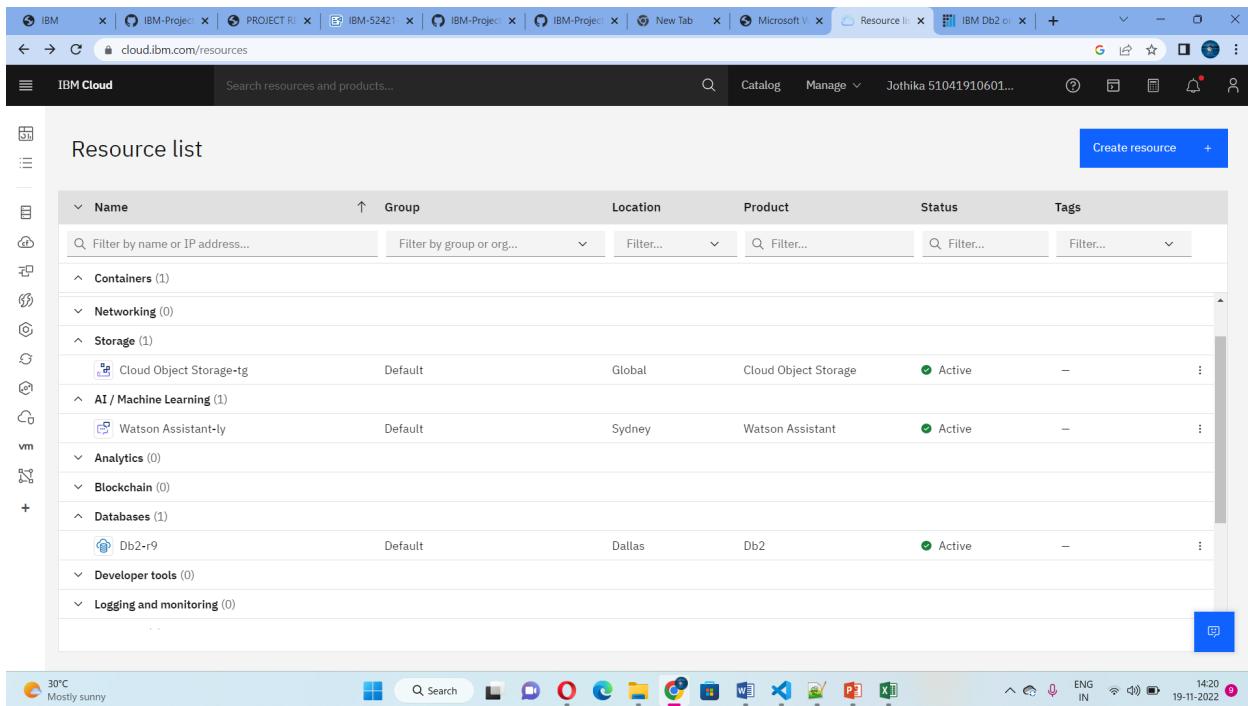
PYTHON CODE:



The screenshot shows the Visual Studio Code interface with the file `sendgrid.py` open. The code uses the `smtplib` library to send an email alert about product shortage. It imports `os` and `dotenv` for environment variables, and `MIMEMultipart`, `MIMEText`, and `MIMEBase` from the `email.mime` module. The code defines a function `def alert(main_msg):` which sets up the email message with `mail_from` and `mail_to`. It then tries to connect to `smtp.sendgrid.net` using `smtplib.SMTP_SSL`, logs in with an API key, and sends the message. The terminal shows the command `python sendgrid.py` being run.

```
File Edit Selection View Go Run Terminal Help sendgrid.py - project - Visual Studio Code
PROJECT uploads > sendgrid.py ...
EXPLORER uploads > sendgrid.py ...
static Screenshot (83).png
style.css templates add_stock.html
add_stockb.html buy.html cosmetic.html dashboard.html delete_stock.html flour.html fruit.html login.html oitems.html registration new.html reset.html.html retails.html softdrinks.html stationary.html update_stock.html vegetables.html uploads app.py python-39 (3)...
SAMPLE PYTHON.py sendgrid.py python-3.9...
Dockerfile.txt requirements.txt
OUTLINE TIMELINE
sendgrid.py 1
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS C:\Users\Mayakkannan\Desktop\project>
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
powershell + x
Type here to search
30°C Mostly sunny 13:57
19-11-2022
Ln 1, Col 1 Spaces: 3 UTF-8 CRLF Python 3.10.7 64-bit
IBM Cloud Search resources and products... Catalog Manage Jothika 51041910601...
Create resource +
Resource list
Name Group Location Product Status Tags
Containers (1)
Networking (0)
Storage (1)
Cloud Object Storage-tg Default Global Cloud Object Storage Active -
AI / Machine Learning (1)
Watson Assistant-ly Default Sydney Watson Assistant Active -
Analytics (0)
Blockchain (0)
Databases (1)
Db2-r9 Default Dallas Db2 Active -
Developer tools (0)
Logging and monitoring (0)
30°C Mostly sunny
Q Search
14:20 9
ENG IN
19-11-2022
```

c. Database schema



The screenshot shows the IBM Cloud Resource list interface. It displays a table of resources with columns for Name, Group, Location, Product, Status, and Tags. The resources listed include various services like Cloud Object Storage, Watson Assistant, and Db2. The interface also includes a sidebar for navigation and a toolbar at the bottom.

| Name | Group | Location | Product | Status | Tags |
|----------------------------|---------|----------|----------------------|--------|------|
| Containers (1) | | | | | |
| Networking (0) | | | | | |
| Storage (1) | | | | | |
| Cloud Object Storage-tg | Default | Global | Cloud Object Storage | Active | - |
| AI / Machine Learning (1) | | | | | |
| Watson Assistant-ly | Default | Sydney | Watson Assistant | Active | - |
| Analytics (0) | | | | | |
| Blockchain (0) | | | | | |
| Databases (1) | | | | | |
| Db2-r9 | Default | Dallas | Db2 | Active | - |
| Developer tools (0) | | | | | |
| Logging and monitoring (0) | | | | | |

8. TESTING

1. Test cases

| | | | Date | 18-Nov-22 | | | | | | |
|------------------|--------------|------------|--|---------------|---|--|--|---------------------|--------|-------------------------------|
| Test case ID | Feature Type | Component | Test Scenario | Pre-Requisite | Steps To Execute | Test Data | Expected Result | Actual Result | Status | Comments |
| LoginPage_TC_001 | Functional | Home Page | Verify user is able to see the Login/Signup popup when user clicked on My account button | | 1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Signup popup displayed or not | https://shopenzer.com/ | Login/Signup popup should display | Working as expected | Pass | |
| LoginPage_TC_002 | UI | Home Page | Verify the UI elements in Login/Signup popup | | 1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Signup popup with below UI elements: a.email text box b.password text box c.Login button d.New customer? Create account link e.Last password? Recovery password link | https://shopenzer.com/ | Application should show below UI elements: a.email text box b.password text box c.Login button with orange colour d.New customer? Create account link e.Last password? Recovery password link | Working as expected | Fail | Steps are not clear to follow |
| LoginPage_TC_003 | Functional | Home page | Verify user is able to log into application with Valid credentials | | 1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button | Username: chalam@gmail.com password: Testing123 | User should navigate to user account homepage | | | |
| LoginPage_TC_004 | Functional | Login page | Verify user is able to log into application with Invalid credentials | | 1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter Invalid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button | Username: chalam@gmail.com password: Testing123 | Application should show 'incorrect email or password' validation message. | | | |
| LoginPage_TC_005 | Functional | Login page | Verify user is able to log into application with Invalid credentials | | 1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter Invalid username/email in Email text box 4.Enter invalid password in password text box 5.Click on login button | Username: chalam@gmail.com password: Testing12367868786876876 | Application should show 'incorrect email or password' validation message. | | | |

2. User Acceptance Testing

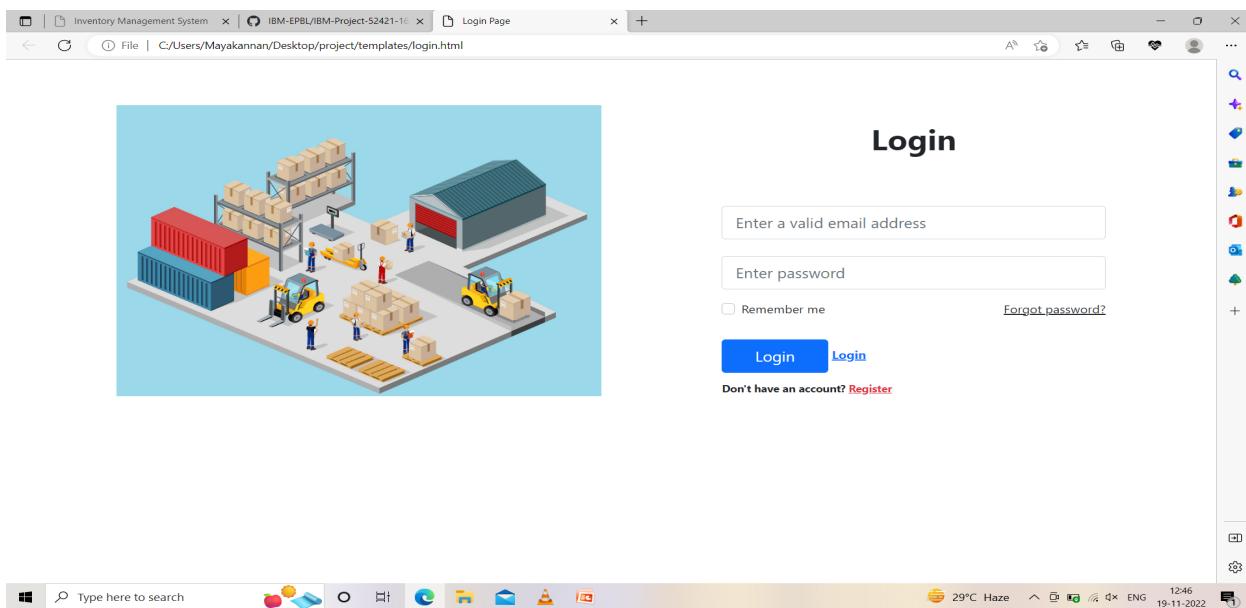
This report shows the number of test cases that have passed, failed, and untested.

| Section | Total cases | Not Tested | Fail | Pass |
|---------------------|-------------|------------|------|------|
| Print Engine | 7 | 0 | 0 | 7 |
| Client Application | 50 | 0 | 0 | 50 |
| Security | 3 | 0 | 0 | 3 |
| Outsource shipping | 3 | 0 | 0 | 3 |
| Exception Reporting | 9 | 0 | 0 | 9 |
| Version control | 2 | 0 | 0 | 2 |
| Final Report Output | 4 | 0 | 0 | 4 |

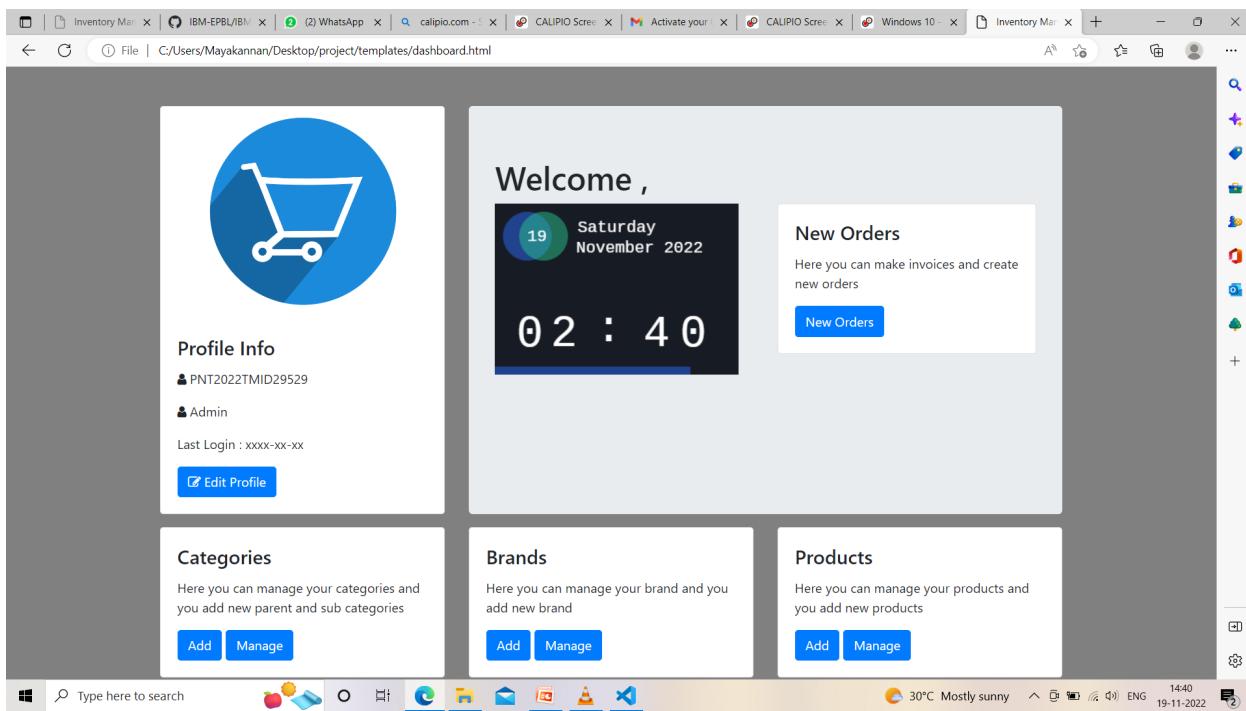
9. RESULT

1.PERFORMANCE MATRICES

LOGIN PAGE



DASHBOARD PAGE



ADD STOCK

The screenshot shows a Windows desktop environment with a browser window open to 'add_stock.html'. The page has a dark blue sidebar on the left with options: 'Add stock' (selected), 'Update stock details', 'View stock', 'Delete stock', and 'Log out'. The main content area has a title 'ADD STOCK' and a form with fields: 'Product name:' (input field), 'Item quantity:' (input field), and 'Warehouse location:' (dropdown menu set to 'Chennai'). A 'SUBMIT' button is at the bottom. The taskbar at the bottom shows various pinned icons and the date/time: 14:40 19-11-2022.

DELETE STOCK

The screenshot shows a Windows desktop environment with a browser window open to 'delete_stock.html'. The page has a dark blue sidebar on the left with options: 'Add stock', 'Update stock details', 'View stock', 'DELETE' (selected), and 'Log out'. The main content area has a title 'Delete stock' and a form with a single field: 'Product name:' (input field). A 'DELETE' button is at the bottom. The taskbar at the bottom shows various pinned icons and the date/time: 14:41 19-11-2022.

Thus the project has been successfully implemented and executed.

10. ADVANTAGES

- It helps to maintain right amount of stocks
- It leads to more organised warehouse
- It saves time and money
- Improves efficiency and productivity
- Schedule maintenance

DISADVANTAGES

- Increased space is need to hold the inventory
- Complexity
- High implementation costs
- Malicious Hacks.
- Works for only a single company.

11. CONCLUSION

From the analysis it is clear that there is high accumulation of inventory in BOSCH LTD. The company has installed all the type of machines to carry the production as well as systematic examining of goods but the only thing the company needs to maintain sound inventory management and use of appropriate techniques to make sure greater ease in the production. There must be periodic review by the management mainly material planning and control department is must to see that the level of inventories are fixed depending upon circumstances and avoid unnecessary building up of stocks which result in locking up of scarce funds. To improve improved inventory management system the company should be open to enhance continuous production for which company has to invest time and effort.

12. FUTURE SCOPE

The scope of an inventory system can cover many needs, including valuing the inventory, measuring the change in inventory and planning for future inventory levels. The value of the inventory at the end of each period provides a basis for financial reporting on the balance sheet. Measuring the change in inventory allows the company to determine the cost of inventory sold during the period. This allows the company to plan for future inventory needs.

13. APPENDIX

Source Code:<https://github.com/IBM-EPBL/IBM-Project-52421-1661003156.git>

GitHub:<https://githubM-EPBL/IBM-Project-52421-1661003156.c>

Demo Link:<https://youtu.be/Cb183fmwt1M>